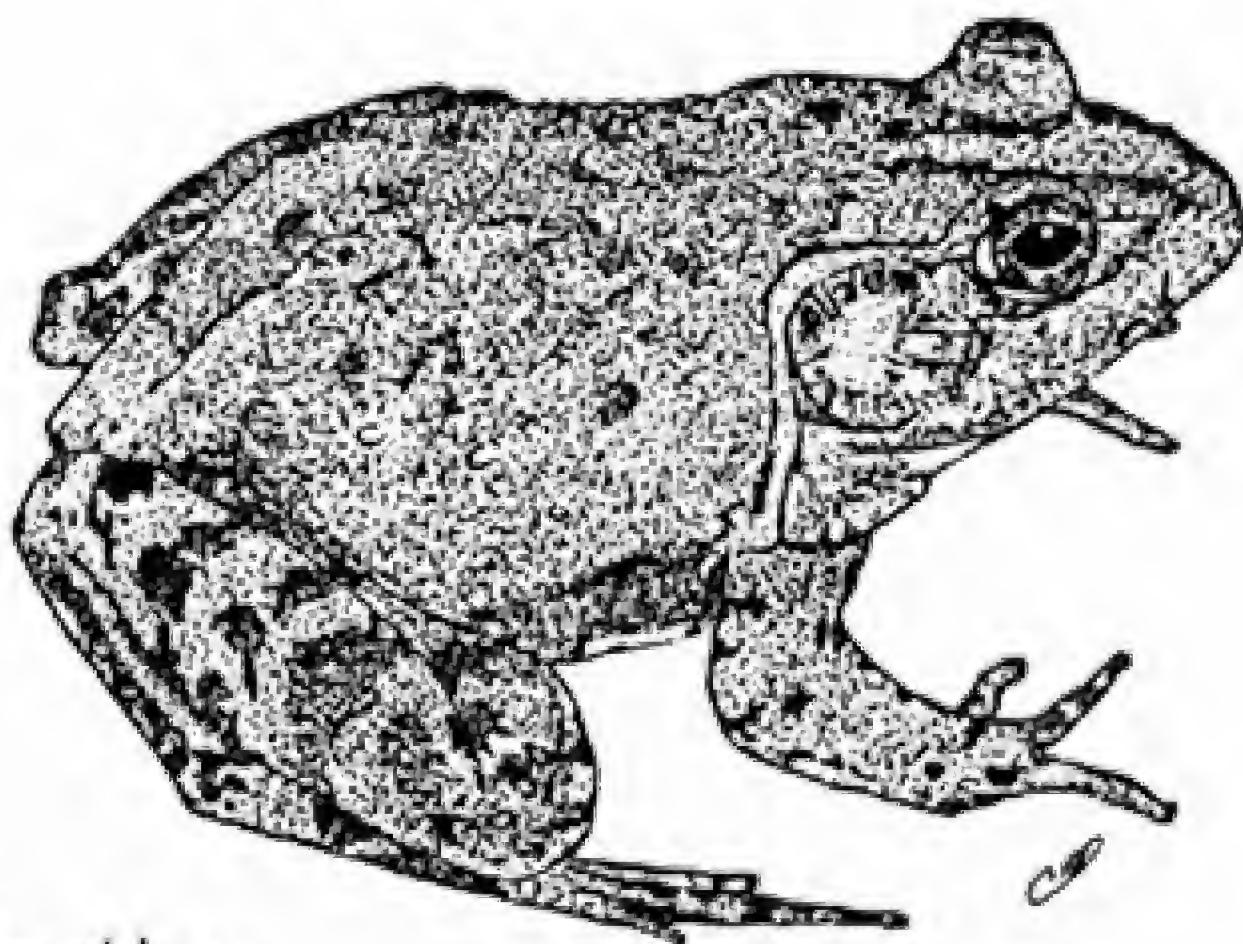


GATESBEIANA



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BULLETIN INFORMATION

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Manuscripts being submitted for publication should be typewritten (double spaced) on good quality 8½ by 11 inch paper, with adequate margins. Consult the style of articles in this issue for additional information, including the appropriate format for literature citations. The metric system should be used for reporting all types of measurement data. Computer diskettes (Word or WordPerfect format) are desired for longer papers. Submissions concerning the herpetofauna of selected areas, such as a state park or county, should be prepared in article rather than field note format. Articles will be refereed by the editor and at least one other qualified reviewer. All changes must be approved by the author before publication; therefore, manuscripts must be received by the editor before the first of March and September to be considered for publication in the spring or fall issue, respectively, of *Catesbeiana*. Reprints of articles are not available to authors; however, authors may reprint articles themselves to meet professional needs.

(Editorial policy continued on inside back cover)

CATESBEIANA

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Volume 19

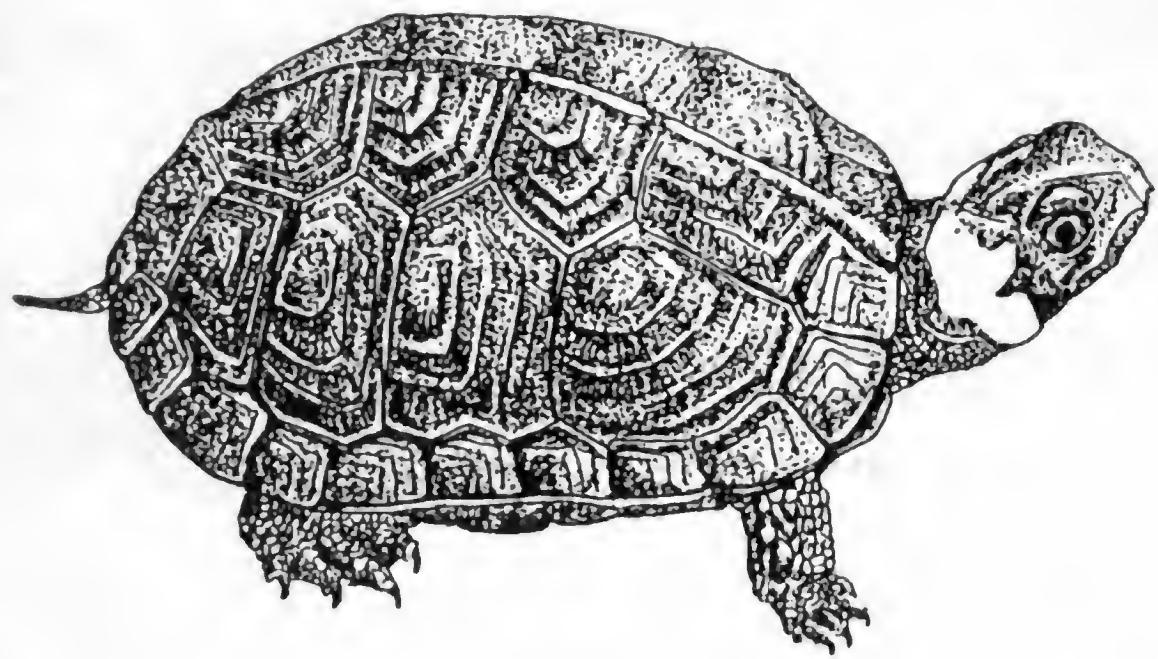
Fall 1999

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Next Meeting
October 23, 1999
Three Lakes Park
Henrico County
See page 76 for details



Clemmys muhlenbergii MJP'97

Amphibians and Reptiles of Beaver Pond Habitats in the Laurel Fork Recreation Area, Highland County, Virginia

Steven M. Roble

Virginia Department of Conservation and Recreation

Division of Natural Heritage

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The Laurel Fork area in the extreme northwestern corner of Highland County along the West Virginia border is one of the most biologically interesting areas of Virginia (Hoffman, 1987). A visitor to this region is more likely to believe that he or she is in eastern Canada or New England than Virginia. In addition to a variety of boreal plants including the conspicuous red spruce (*Picea rubens*), this portion of the George Washington National Forest harbors a number of northern species of insects, birds, and mammals at or near the southern limits of their geographic ranges (Carle, 1982; Larner, 1985; Pagels et al., 1990; Byrd and Johnston, 1991; Handley, 1991; Roble, 1994; Fleming and Moorhead, 1996; Hoffman, 1996; Pagels and Baker, 1997). The known herpetofauna does not include any boreal relicts, although this area offers the best potential habitat in Virginia for the federally threatened Cheat Mountain salamander (*Plethodon nettingi*), a species documented to date only from West Virginia (Green and Pauley, 1987; Hoffman, 1987).

Although local meteorological data are lacking (Bailey and Ware, 1990; Adams and Stephenson, 1991), the Laurel Fork area is probably one of the coldest places in Virginia. General observations indicate that the climate of the area is decidedly cooler and wetter than nearby lower elevation sites to the east, and the heat and humidity rarely are oppressive on mid-summer days (Fleming and Moorhead, 1996; Roble, pers. obs.). Winters are typically harsh with snow lingering well into the spring months. Weather data for two sites (Snowshoe and Spruce Knob Lake) in West Virginia, located approximately 20 km to the west and north of the Laurel Fork area, respectively, indicate a mean January temperature of -5.5°C and a mean July temperature of 19.0°C (Bailey and Ware, 1990). The growing season of the Laurel Fork area is relatively short, probably being comparable to the figure of 130-140 days cited by Bailey and Ware (1990) for the aforementioned West Virginia sites (see also Figure 5 in Woodward and Hoffman [1991]). Consequently, phenological activities are often delayed by several weeks to

a month relative to lower elevation sites. For example, my visit of 23 May 1997 revealed that conditions were comparable to those noted at several other sites in the western portion of the state nearly a month earlier.

The forests of the Laurel Fork area (particularly red spruce and eastern hemlock) were logged extensively in the 1920s, and the slash remaining from those harvests kindled several major fires during the 1930s (Fleming and Moorhead, 1996). The area has recovered greatly since that time and is now a frequent destination for naturalists, hikers, and other outdoor enthusiasts.

Published accounts of the herpetofauna of the Laurel Fork area are limited. Tobey (1985), Mitchell (1994), and Mitchell and Reay (1999) plotted very few records for this part of Highland County. Young (1993) specifically mentioned that four of the 12 salamander species he recorded in Highland County were found near the Locust Spring picnic and camping area. He also documented the wood frog (*Rana sylvatica*) for the first time in this county, noting that one specimen was collected in the Locust Spring area (record not plotted in Mitchell and Reay, 1999). Judging from his species accounts, however, most or all of the reptiles Young (1993) recorded in Highland County were found at sites other than the Laurel Fork area. Adams et al. (1996) quantitatively sampled the salamander community found in and near Buck Run, documenting a total of nine species.

The purpose of this article is to briefly summarize my observations of amphibians and reptiles at various beaver pond habitats in the western portion of the Laurel Fork Recreation Area. All of these observations were made incidental to my ongoing studies of the insect fauna of the region. Rarely did I actively seek adult or larval amphibians or reptiles at the beaver ponds or in nearby forest and seepage habitats. Therefore, it is quite possible that some species were missed. I made 14 visits spanning 17 days to this area between 1992 and 1999; dates ranged from 21 May to 3 October. All but one survey was made during daylight hours, although several surveys ended at dusk. My only nocturnal survey was conducted on 5 August 1999.

Most of my observations were made at the beaver pond complex (about 15 active ponds) near the headwaters of Buck Run (east of the Locust Spring picnic area), the northernmost drainage in the Laurel Fork region. Water temperatures recorded at three ponds on 23 May 1997 ranged from 14° C to

Laurel Fork Herps

21°C (corresponding air temperatures were 20° to 26° C). The elevation in this area is approximately 1,115 m (3,657 feet); many of these ponds are more boggy (i.e., contain extensive areas of sphagnum moss) than those in the next five drainages to the south. I also visited active and inactive beaver pond habitats in the upper reaches of the following drainages (arranged from north to south) at least once: Locust Spring Run, Slabcamp Run, Lost Run, Bearwallow Run, and Newman Run. Elevations of beaver ponds in these drainages ranged from about 1,050 to 1,085 m. Only two, small, inactive beaver ponds were present in the Bearwallow Run drainage during my visits of 7 September 1994 and 30 July 1999; many abandoned beaver ponds of larger size had succeeded to meadow conditions. Topographic maps of this area show more ponds than are currently present in this drainage. Vegetation present at beaver pond habitats in the Laurel Fork study area included various sedges (*Carex* spp.), rushes (*Juncus* spp.), bulrushes (*Scirpus* spp.), spikerushes (*Eleocharis* spp.), pondweeds (*Potamogeton* spp.), and bladderworts (*Utricularia* spp.).

The following accounts summarize my observations of the six amphibian and three reptile species recorded at beaver pond habitats in the Laurel Fork Recreation Area.

ANNOTATED CHECKLIST

Amphibians

Ambystoma maculatum (Spotted Salamander)

This species is apparently uncommon in the Buck Run area. I did not observe any adults or juveniles, but noted the presence of egg masses on 19 June 1992 (1 pond), 6 June 1996 (5 ponds), 26 June 1996 (1 pond), 23 May 1997 (3 ponds), and 21 May 1999 (8 ponds). I found a total of 13 egg masses on the latter date, including a maximum of 4 at any one pond (up to 10/pond in previous years). On 23 May 1997, I also found one spotted salamander egg mass in a water-filled road rut and additional egg masses in three headwater seepage areas. One of the seepages was completely impounded by a small beaver dam and another was partially impounded by a fallen red spruce tree. The maximum width of both pools was 10 m. The third seepage area, which contained one egg mass, was very broad, measuring approximately 8 m across at the point where groundwater reached the surface. It was not

impounded (maximum depth \leq 5 cm) and was actively flowing. Spotted salamanders typically breed in vernal pools or semipermanent ponds (Martof et al., 1980; Pfingsten and Downs, 1989; Petranka, 1998), so the presence of eggs in seepage habitats is rather unusual.

An adult spotted salamander was found under a log in the Buck Run area by participants of the 1998 Governor's School during a survey conducted in late June; egg masses and larvae were also found in a water-filled road rut near the headwaters of Slabcamp Run (C. S. Hobson, pers. comm.). Tobey (1985), Young (1993), and Adams et al. (1996) did not record the spotted salamander from Highland County, but Mitchell and Reay (1999) plotted a (recent) record for the Laurel Fork area.

I did not record spotted salamanders in the other five drainages, but my surveys of ponds in those areas did not typically occur until late summer or fall, when adults, eggs, and larvae of this species are either absent or virtually undetectable.

Notophthalmus viridescens viridescens (Red-spotted Newt)

Newts were reported from Highland County by Tobey (1985) and Mitchell and Reay (1999), but not Young (1993). Adams et al. (1996) found a total of seven individuals at six of their eight survey sites along Buck Run. My observations indicate that newts are common to abundant throughout the Laurel Fork area. This is not surprising because Gill (1978) hypothesized that newts evolved to breed in beaver ponds, wetland habitats that occur unpredictably on the landscape in both time and space. I recorded adult newts in all six drainages within the study area. Efts were encountered in forest habitats and larvae were observed at the Buck Run ponds. Single metamorphs were found on 30 July 1999 (22 mm TL) and 6 August 1999 (30 mm TL). Numerous mating pairs were observed in the various beaver ponds. Dead adults were found in the Buck Run ponds on 6 June 1996 ($n = 8$) and 23 May 1997 ($n = 5$). The cause of death of these animals was not determined, but I recommend that future visitors to these ponds be alert for dead or dying newts. With global concerns regarding amphibian declines in relatively pristine areas (Blaustein et al., 1994; Drost and Fellers, 1996), including recent evidence of catastrophic mortality due to pathogens at some sites (e.g., Laurance et al., 1996; Lips, 1998), this "wilderness" area of Virginia may

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warrant future monitoring by amphibian biologists.

Pseudacris crucifer crucifer (Northern Spring Peeper)

Spring peepers were not reported from Highland County by Tobey (1985), but Young (1993) found them at a site near Headwaters in the eastern part of the county. Mitchell and Reay (1999) recorded this species from the Laurel Fork area based on my collections. Spring peepers were noted on all of my visits to the Buck Run ponds, ranging from 21 May to 3 October. Metamorphosing juveniles were seen on 14 July 1995, and recent metamorphs (tail stubs resorbed) were found on 17 August 1995, 3 October 1997, 30 July 1999, and 6 August 1999. Several metamorphs had already dispersed >50 m from their natal ponds by the time I encountered them. I also recorded spring peepers in the Locust Spring Run, Lost Run, and Newman Run drainages. This species probably occurs in all six drainages within the study area.

Rana clamitans melanota (Green Frog)

Green frogs were first reported from Highland County by Young (1993), who found one specimen near Headwaters (record not plotted in Mitchell and Reay, 1999). I observed numerous adults, juveniles, and tadpoles at beaver ponds in the Buck Run, Locust Spring Run, Slabcamp Run, and Lost Run drainages. Green frog tadpoles were also recorded at p. on the Bearwallow Run and Newman Run drainages. Single, fresh egg masses were present at active beaver ponds in the Buck Run drainage on 14 July 1995 and 26 June 1996, and at an abandoned beaver pond in the Slabcamp Run drainage on 5 August 1999. I found two egg masses (one fresh, one several days old) on 30 July 1999 at nearby ponds in the Lost Run drainage. One dead juvenile was found along Locust Spring Run on 29 August 1997. Many juvenile and (fewer) adult green frogs were encountered along pond margins and streams in the study area.

Rana palustris (Pickerel Frog)

Pickerel frogs were not reported from Highland County by Tobey (1985) or Young (1993), but Mitchell and Reay (1999) plotted one locality in the Laurel Fork area. This record is based on two adult males (George Mason

University #2924-2925) collected on 5 April 1986 by K. W. Ballard and B.L. Stanford near Laurel [= Locust] Spring (J. C. Mitchell, pers. comm.). I observed several juvenile pickerel frogs along Slabcamp Run on 29 August 1997, my only encounter with this species in the study area.

Rana sylvatica (Wood Frog)

As noted previously, Young (1993) found one specimen in the Locust Spring area. Mitchell and Reay (1999) mapped two records in western Highland County, both south of the Laurel Fork area. I recorded wood frogs only on 6 September 1994 in the Buck Run beaver pond complex, but suspect they are present in most or all of the drainages in the study area.

Reptiles

Chelydra serpentina serpentina (Common Snapping Turtle)

Young (1993) reported a DOR specimen from near Headwaters. The only record plotted for snapping turtles in Highland County by Mitchell (1994) and Mitchell and Reay (1999) appears to be farther west and apparently represents another locality. I recorded this species at several of the Buck Run ponds on five visits (three in June and one each in July and August). One adult was basking on a beaver lodge before my approach disturbed it. On 30 July 1999, I observed a total of 4 snapping turtles (3 adults, 1 subadult), each basking at a different pond within the Lost Run drainage. Two of these individuals were basking on beaver dams and the other two on logs.

Chrysemys picta picta (Eastern Painted Turtle)

Young (1993) mentioned several unspecified sight records and one collection record from Highland County. Only the latter (near the Bath County line) was plotted by Mitchell (1994) and Mitchell and Reay (1999). I recorded a total of two painted turtles (both adults) during my various visits to the Laurel Fork area. One was observed on 6 June 1996 at the Buck Run ponds and the other was found on 30 July 1999 at a pond in the Locust Spring Run drainage. This species is apparently rare in the Laurel Fork area. It is somewhat remarkable that painted turtles have succeeded in colonizing the

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upper reaches of these high elevation drainages, because pond habitats other than those created by beavers are nonexistent.

Nerodia sipedon sipedon (Northern Water Snake)

Tobey (1985) and Mitchell (1994) both plotted only one record for this species in Highland County, whereas Mitchell and Reay (1999) mapped two nearby sites. Young (1993) noted that he found northern water snakes only at low elevations in the county. I observed adults at the Buck Run ponds on 6 September 1994 ($n = 3$) and 26 June 1996 ($n = 1$).

DISCUSSION

Beaver ponds in the Laurel Fork area of Highland County support a limited fauna of amphibians and reptiles. Only two salamanders, four frogs, two turtles, and one snake were recorded during my visits. These high elevation habitats may be too cold, provide insufficient food supply or be too unpredictable in time and space (as beavers colonize and abandon drainages) to provide suitable breeding sites for other species that occur at lower elevations in the region. Amphibian species that are conspicuously absent include the northern cricket frog (*Acris crepitans*), gray treefrog (*Hyla versicolor*), and bullfrog (*Rana catesbeiana*). Mitchell and Reay (1999) plotted a record for the four-toed salamander (*Hemidactylum scutatum*) from in or near the Laurel Fork Recreation Area. This species likely breeds in sphagnum-dominated seepage areas and beaver pond habitats in the study area. As noted above, my surveys were not exhaustive and I may have overlooked one or more other species (e.g., *Ambystoma jeffersonianum*, *Bufo americanus*). Nevertheless, the woodland salamander fauna, as well as many other interesting aspects of the flora and fauna of this region will continue to draw amateur naturalists and professional biologists for decades to come.

ACKNOWLEDGMENTS

I thank Richard L. Hoffman and Christopher S. Hobson for reviewing an earlier draft of this manuscript. This paper is dedicated to the memory of Kenneth O. Bratland, on whose farm I made many memorable natural history observations.

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Noteworthy Snake Records from False Cape State Park, City of Virginia Beach, Virginia

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The herpetofauna of the Back Bay region of extreme southeastern Virginia Beach, including Back Bay National Wildlife Refuge and False Cape State Park, has been well documented (Pague and Mitchell, 1982, 1991). These authors recorded 11 species of snakes from the region in their first paper. Additional field sampling and a larger study area accounted for the increased total of 18 species reported in their subsequent paper. The first author of this report (GMW) served as chief ranger/interpreter at False Cape State Park from May 1996 to March 1999 and made frequent observations of the resident herpetofauna of this barrier beach-marsh system which comprises the northern extent of the Currituck spit. This note briefly summarizes his most significant snake records from 1996-98. The second author (SMR) and other field staff of the Division of Natural Heritage conducted surveys in the park during 30-31 August 1995, 18-22 May 1998, and 17-20 August 1998, but only recorded common species of snakes, including eastern cottonmouth (*Agkistrodon p. piscivorus*), northern black racer (*Coluber c. constrictor*), black rat snake (*Elaphe o. obsoleta*), northern water snake (*Nerodia s. sipedon*), brown water snake (*Nerodia taxispilota*), and eastern ribbon snake (*Thamnophis s. sauritus*).

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Mud snake (*Farancia abacura*) -- Four individuals, all approximately 1 m in length, were found in the park by GMW during 1998. At 1000 h on 8 May, the first specimen (see accompanying photograph) was found crawling across a gravel road in the Wash Woods area of the park near the Environmental Education Center. Conditions at the time of capture were sunny, humid, and about 70° F (21° C). The second individual was found at 1030 h on 29 June on the edge of a sand road, 0.8 km south of False Cape Landing. The maximum air temperature on this date was 89° F. Another mud snake was found at noon on 10 July along a sand road at Wash Woods, 100 m west of the intersection of the main park road and a service road. Conditions were humid and 85° F. The last mud snake was observed at 2230 h on 14 July while crossing the main park road, about 400 m north of the aforementioned intersection. No voucher specimens were collected. These are the first documented records of the mud snake in False Cape State Park as well as the first from the northern end of Currituck spit. Pague and Mitchell (1991) previously recorded this species from Back Bay, but the lone record plotted in Mitchell (1994) and Mitchell and Reay (1999) for this region is at the north end of the bay, indicating that it was obtained in an area that was recently (since 1990) added to the national wildlife refuge. Palmer and Braswell (1995) stated that mud snakes are apparently absent from most of the Outer Banks of North Carolina; their nearest locality from this extensive barrier beach system is from Bodie Island, about 50 km south of the Virginia state line.

Rainbow snake (*Farancia e. erythrogramma*) -- This species was not recorded in 1996, but specimens were found in the Wash Woods area of the park on 24 March and 7 June during 1997, and on 24 March and 15 July during 1998. On the latter date an adult female (ca. 1.1 m TL) was uncovered in sand at the edge of a bulkhead along Back Bay; 10 eggs were found near her. The eggs began hatching (in captivity) on 1 September. Rainbow snakes were previously reported from Back Bay, including the state park (Pague and Mitchell, 1982, 1991; Mitchell, 1994; Mitchell and Reay, 1999).

Red-bellied water snake (*Nerodia e. erythrogaster*) -- An adult (ca. 1.1 m TL) was captured by GMW at 1930 h on 2 August 1998 under a plywood board at the maintenance yard in the Wash Woods area of the park. The specimen was released at a later date. This constitutes the first record of this species from False Cape State Park and is also the first record from the

Snakes of False Cape

Back Bay area (Mitchell, 1994; Mitchell and Reay, 1999). The only water snakes previously recorded from Back Bay were *N. sipedon* and *N. taxispilota* (Pague and Mitchell, 1982, 1991). The nearest documented locality for *N. erythrogaster* on the Outer Banks of North Carolina is at Nags Head Woods Ecological Preserve, about 70 km south of the Virginia state line (Braswell, 1988; Palmer and Braswell, 1995).

Other snakes observed within the park by GMW were the eastern hognose snake (*Heterodon platirhinos*), rough green snake (*Opheodrys aestivus*), and northern brown snake (*Storeria d. dekayi*). The latter species was recorded only at Barbour Hill (Back Bay side of park) on 10 July 1997 and in the Wash Woods area on 15 September 1998. Several species with nearly statewide distributions in Virginia, including the copperhead (*Agkistrodon contortrix*), worm snake (*Carphophis amoemus*), ringneck snake (*Diadophis punctatus*), and common garter snake (*Thamnophis sirtalis*) remain unrecorded from False Cape State Park.

A yearling northern water snake was found by GMW on 4 January 1997 under a piece of tin on Cedar Island in Back Bay. Mitchell (1994) reported that this species is primarily active from March to October in Virginia. Southern leopard frogs (*Rana sphenocephala*) were observed being consumed by a black racer (GMW; 3 June 1997) and a ribbon snake (SMR; 18 May 1998). Cottonmouths were documented feeding on a ranid tadpole (S. Y. Erdle; 20 May 1998) and a ribbon snake (GMW; 21 November 1997). Mitchell (1994) did not list ribbon snakes as known prey for the cottonmouth in Virginia or elsewhere in the eastern portion of its range.

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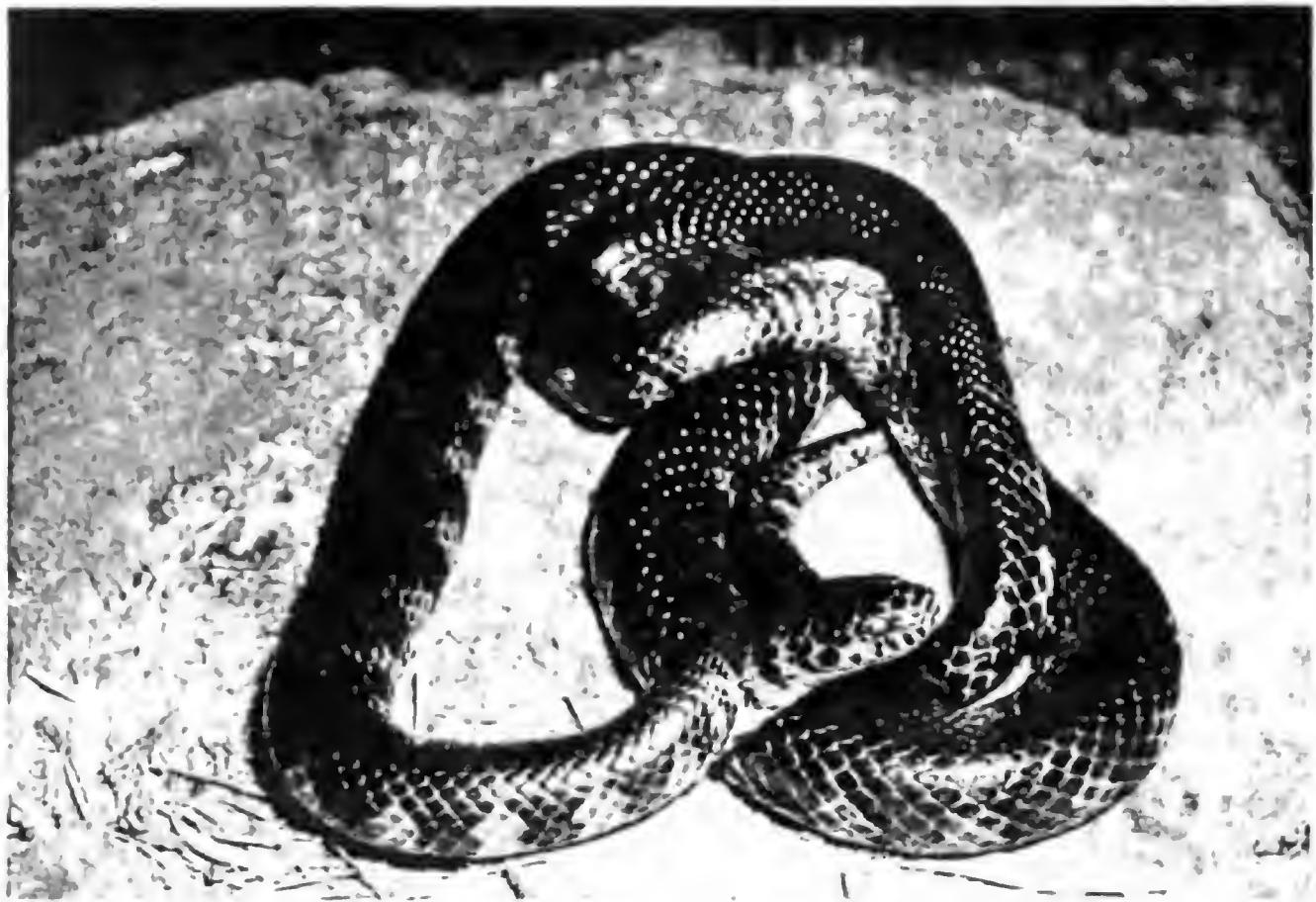
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Mud snake (*Farancia abacura*) captured at False Cape State Park on 8 May 1998 by Gary M. Williamson. Photograph by Steven M. Roble.

FIELD NOTES

Hyla squirella (Squirrel Treefrog). VA: King William Co., small ravine N of the Pamunkey River, ca. 2.9 km ENE Littlepage Bridge (U.S. Hwy 301). 7 April 1999. Anne C. Chazal and Christopher S. Hobson.

During zoological surveys for the Virginia Department of Conservation and Recreation a new county record for the squirrel treefrog was documented. An adult specimen was collected beside a small seep about 1600 h on 7 April 1999. The seep was on a southeastern facing slope, along a small intermittent stream that flows into a beaver meadow. The weather conditions were clear and sunny with an air temperature of about 26°C. The specimen was collected and will be deposited in the Virginia Museum of Natural History.

The squirrel treefrog reaches its northern distributional limits in Virginia (Conant, R. and J. T. Collins. 1998. A Field Guide to Reptiles and Amphibians, Eastern and Central North America. Third, expanded edition. Houghton Mifflin Co., Boston. 616 pp.). Most Virginia occurrences are concentrated in the southeastern corner of the state (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.; Tobey, F. J. 1985. Virginia's Amphibians and Reptiles, a Distributional Survey. Virginia Herpetological Society, Purcellville, Virginia. 114 pp.). The northernmost record is reported from Mason Neck National Wildlife Refuge, Fairfax County (Ernst, C. H. et al. 1997. The amphibians and reptiles of Ft. Belvoir and northern Virginia. Bulletin of the Maryland Herpetological Society 33(1): 1-62). Our King William County specimen is only the second vouchered record north of the James River in Virginia.

ANNE C. CHAZAL and CHRISTOPHER S. HOBSON
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Division of Natural Heritage
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Richmond, Virginia 23219

Amphiuma means (Two-toed Amphiuma). VA: King William Co., Sweet Hall Marsh, Pamunkey River. 9 September 1999. Dean P. Walton and Philip P. Coulling.

This note provides information on an occurrence of this uncommonly observed species along the extreme northern edge of its range in Virginia (Mitchell, J.C. and K.K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.) and detailed information on the surrounding habitat. The amphiuma looked to have been freshly killed when it was discovered lying in a detritus-filled water channel and may have been trampled during a vegetation survey of the swamp forest. This site is associated with the tidal, but still typically freshwater, section of the Pamunkey River. Hummock-and-hollow microtopography is common in this forested habitat and the hollows (water channels) are diurnally flooded by tidal activity. Hummocks associated with trees or shrub colonies are ca. 15 cm above the hollows at low tide. Vegetation in the 20 x 20 m plot in which the amphiuma was found was dense and diverse. The following species, each estimated to have between 2% and 25% cover in the plot, were noted: swamp tupelo (*Nyssa biflora*), red maple (*Acer rubrum*), and pumpkin ash (*Fraxinus profunda*) in the overstory; sweet bay (*Magnolia virginiana*), possum-haw (*Viburnum nudum*), sweet pepperbush (*Clethra acuminata*), winterberry (*Ilex verticillata*), silky dogwood (*Cornus cf. amomum*), Virginia willow (*Itea virginica*), coastal fetterbush (*Leucothoe racemosa*), wild azalea (*Rhododendron* sp.), bayberry, (*Myrica cerifera*), and smooth alder (*Alnus serrulata*) in the shrub stratum; greenbrier (*Smilax rotundifolia*), groundnut (*Apios americana*), halberdleaf tearthumb (*Polygonum arifolium*), water smartweed (*Polygonum cf. punctatum*), royal fern (*Osmunda regalis* var. *spectabilis*), cinnamon fern (*Osmunda cinnamomea*), and netted chain fern (*Woodwardia areolata*) in the herbaceous and liana strata. Thirty-two other vascular plant species were also noted, each with cover of less than two percent.

The amphiuma will be deposited in the Virginia Museum of Natural History.

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Field Notes

Graptemys geographica (Common Map Turtle). VA: Russell Co., Clinch River at Nash Ford. 3 May 1999. Anne C. Chazal, Christopher S. Hobson and Steven M. Roble; 5 May 1999. Anne C. Chazal and Steven M. Roble.

Common map turtles occur in all three major river systems (Clinch, Holston, Powell) of the Tennessee River drainage in southwestern Virginia (Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, D. C. 352 pp.; Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). Map turtles are commonly observed in riverine habitats in this portion of the state (Mitchell, op. cit.; Sattler, P. 1997. Herpetological survey of Copper Creek. *Catesbeiana* 17: 31-37). Recent, limited observations that we made this spring indicate that the public boat launch along the Clinch River near Nash Ford, ca. 0.5 km upstream of the County Route 645 bridge, may be one of the best sites in the state to view map turtles. The river is shallow (0.5-1.5 m) and 50-70 m wide at this location. We counted 14 basking adults during a brief, late afternoon (1600 h) visual survey of the far (= north) shoreline on 3 May 1999. Two days later we observed 26 map turtles, including four large adult females, at the site during mid-afternoon (1400 h) despite overcast conditions (air temperature ca. 17°C). Basking sites included logs (mostly) and rocks, with multiple individuals using some of the larger logs. This locality, which is in the central portion of Russell County, was not mapped by either Mitchell (op. cit.) or Mitchell and Reay (op. cit.). Binoculars or a spotting scope are recommended when visiting this site.

**STEVEN M. ROBLE, ANNE C. CHAZAL and
CHRISTOPHER S. HOBSON**

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Pseudemys concinna concinna (Eastern River Cooter). VA: Caroline-Hanover Co. line, Pamunkey River at U.S. Route 301 (Littlepage Bridge). 14 June 1999. Steven M. Roble and Anne C. Chazal.

A yearling river cooter was collected ca. 50 m upstream of the bridge at the above site. There are no previous records of this species from the Pamunkey River (Mitchell, J. C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D. C. 352 pp.; Mitchell, J. C. and K. K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). The specimen will be deposited in the Virginia Museum of Natural History.

STEVEN M. ROBLE and ANNE C. CHAZAL

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Farancia erytrogramma erytrogramma (Rainbow Snake). VA: New Kent Co., Black Creek at County Route 608. 13 May 1999. Dean P. Walton.

A DOR rainbow snake was discovered mid-morning along County Route 608 where it crosses Black Creek; the specimen was collected the following day. The surrounding area is mainly undeveloped bottomland forest and emergent marsh associated with the creek. Rainbow snakes range from Florida to Charles County, Maryland, and are uncommon in Virginia (Mitchell, J.C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.; Mitchell, J.C. and K.K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). This collection site is near the northern end of its range. The specimen will be deposited in the Virginia Museum of Natural History.

DEAN P. WALTON

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217 Governor Street
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Field Notes

Farancia erytrogramma erytrogramma (Rainbow Snake). VA: Caroline County, U.S. Route 17 at Portobago Creek. 23 June 1998. Faye Ferrall.

I found a DOR rainbow snake on U.S. Route 17, ca. 3 m after the county sign into Caroline County from Essex County. The highway crosses Portobago Creek at this juncture. Photographs of the specimen have been deposited in the VHS archives at the Virginia Museum of Natural History. Rainbow snakes were previously reported from Caroline County on the nearby Fort A. P. Hill Military Reservation, their northernmost documented occurrence in Virginia (Roble, S. M. and C. S. Hobson. 1994. Field notes: *Farancia erytrogramma erytrogramma*. *Catesbeiana* 14: 15-16; Mitchell, J. C. and S. M. Roble. 1998. Annotated checklist of the amphibians and reptiles of Fort A. P. Hill, Virginia, and vicinity. *Banisteria* 11: 19-32). The specimen discovered by Roble and Hobson (op. cit.) was taken further upstream along Portobago Creek, ca. 6.3 air km WSW of the Route 17 site.

FAYE FERRALL
144 Senior Creek Place
Lancaster, Virginia 22503

Dues Reminder

Membership in the Virginia Herpetological Society is on a calendar year basis (expires annually on December 31). Please consider renewing your membership for 2000 now (or at least before January 1) to save our treasurer the time and expense needed to mail you a renewal notice. Check the date on your mailing label to determine the year through which you have paid dues. See the last page of this bulletin for the membership application/renewal form. Save postage by paying your dues at the Fall Meeting if you are planning to attend this exciting event.

President's Corner

As I sit in front of my computer and begin to write my last President's Corner, I ponder my experiences over the last two years. I remember field trips to the Clinch Mountain Wildlife Management Area and Twin Lakes State Park where I got to see a multitude of reptiles and amphibians. I also remember having the privilege of proceeding over the society's 40th anniversary. With all these great experiences, my most treasured memories will always be of the society's members. Meeting people who have a common interest and concern of reptiles and amphibians has been unforgettable. I remember meeting kids who amazed me with their knowledge of Virginia's herpetofauna and adults who still have the child-like curiosity needed by any good herpetologist. I will always cherish these memories and my term as President of the Virginia Herpetological Society.

When I began my term, I promised to pursue several goals for the society. Some of these fared well while others fell flat on their face. I am proudest of the goal to establish good customer service. Members can now be assured that they get everything they pay for. This is best reflected by the fact that complaints are down and memberships are up. Much of the credit goes to Secretary/Treasurer Shay Garriock. Through Shay's hard work and dedication, he took the society's books and made them into the best they have been in years. The next Secretary/Treasurer definitely has an easier job because of Shay. Thank you, Shay! The society owes you a tremendous debt of gratitude.

Bob Greenlee will be taking the reins as the society's next President. Over the last two years, Bob was responsible for organizing society meetings and making sure everything was running smoothly. He was also the reason for the continued success of the reptile and amphibian workshop for teachers. The increased attendance at our meetings and general success of the society is in large part a result of Bob's hard work. Just as he has been an asset as President-elect, I am confident that Bob will make an excellent President.

At the next business meeting, we will vote for new officers of President-Elect and Secretary/Treasurer. Both officers are members of the executive committee that determines the society's direction. The position of Secretary/Treasurer is a two-year appointment and responsible for meeting minutes and balancing the society's books. The President-Elect position is

President's Corner

a two-year appointment with the following two years as President. This position helps the President organize fall and spring meetings and events. If you've ever thought that you would like to determine the direction of one of the oldest herpetological societies, then make sure that you come to the fall meeting to throw your hat into the ring. Remember that your active participation in the Virginia Herpetological Society is essential for its continued existence.

Preparations are underway for the fall meeting and symposium. This year's event will be held at the Three Lake Nature Center and Park, Henrico County on October 23, 1999. As always, we will have a reptile and amphibian workshop for teachers, photo contest, and business meeting. We will have a lunch and symposium in which a small fee will be charged to cover expenses. The symposium will have selected presentations from reptile and amphibian research across the Commonwealth. We are lucky this year to have Dr. Richard Hoffman as our guest speaker. Dr. Hoffman is curator of recent invertebrates at the Virginia Museum of Natural History and a longtime expert on Virginia's herpetofauna. Please see the announcement in this journal for directions and additional details. I hope to see you there. Until then, I wish everyone good health and happy herping.

Mike Pinder
President

Minutes from the VHS Spring Meeting

May 21, 1999
Farmville, Virginia

1907 h: VHS President Mike Pinder opened the meeting by introducing himself and asking all present to introduce themselves. A sign-up sheet was passed around.

1912 h: A meeting agenda was handed out. Minutes from the Fall 1998 Meeting (published in Catesbeiana 19 [1]) were approved without questions or corrections. Copies of the latest treasurer's report were handed out. Shay Garriock explained the breakdown of funding sources in the VHS savings/snake brochure fund, as requested at the last business meeting. There was no further discussion concerning the report.

1916 h: Mike presented the Catesbeiana editor's report on behalf of Steve Roble who could not be present at the meeting. Approximately 165 copies were sent out at a printing and postage cost of \$540. A less expensive printing source was still being sought out. Mike also presented the Newsletter Editor's report: 150 copies of Volume 9 (2) were sent out to membership. Mike encouraged membership to continue sending articles, field notes, and artwork to the editors for publication.

1930 h: Shay began discussion concerning the need for more involvement by other VHS members to further develop, enhance, and maintain the VHS Website. Mike Clifford, John Boswell, Whitney Ferrall, and John White offered to volunteer their time and support.

1939 h: New Business: Bob Greenlee announced that the Fall Meeting would be held at Three Lakes Park and Nature Center in Henrico County, Virginia. Tentative dates were not given. A teachers workshop would again take place, with an entry fee as was done in 1998. Member Jason Gibson offered his services as an instructor for the workshop. Time would be allowed for speakers and paper submissions, and a raffle and photo contest would take place. Mike requested raffle donations from the membership, and also asked for opinions concerning lunch provisions at the meeting. It was the general consensus that a lunch and refreshments be provided as was done at the last meeting, given that an admission fee would be charged.

1948 h: Mike reminded attendants that VHS Officer nominations and

elections would be held at the Fall Meeting, and to consider potential candidates for the roles of President, Vice President, and Secretary/Treasurer. After the Fall Meeting, Bob Greenlee will begin his term as President, as Mike steps down. Shay Garriock will complete his two-year term as Secretary/Treasurer.

1952 h: Mike presented the criteria developed for the VHS Lifetime Achievement Award, the first of these being awarded to Frank Tobey at the 1998 Fall Meeting. It was suggested and decided that deceased persons also be included as potential candidates, and this was agreed upon. The criteria were voted on and accepted unanimously.

2002 h: Snake Brochure: Joe Mitchell has submitted the snake brochure manuscript. The brochure will be about 40 pages in length. More snake photos are still needed. There may not be as many copies printed as originally intended due to funding shortages. Mike proposed that the VHS donate \$300 for additional printing costs. Attendants supported this decision by unanimous vote.

2008 h: Herp Atlas: 3,000 copies of the "Atlas of Amphibians and Reptiles in Virginia" authored by Joe Mitchell and Karen Reay are due out in June 1999. Individual copies will be available from VDGIF for \$7.50. Mike proposed that the VHS purchase a proportion of these copies for resale to VHS members. Mike Hayslett motioned that 50 copies be purchased, and the motion was seconded by John White. This was voted on unanimously in favor.

2013 h: Mike suggested VHS approval of Resolution 730, a joint house resolution to suspend chip mill production pending the completion and evaluation of an environmental impact study. Mike also suggested that members write to their congressmen in support of the VHS Resolution. Mike Hayslett motioned approval to pass the resolution; a subsequent vote was unanimous in favor.

The meeting adjourned at 2022 h.

Shay Garriock
Secretary/Treasurer

Treasurer's Report, September 23, 1999

Previous balance on hand:	\$4132.31
 Receipts:	
Membership dues	\$498.50
T-shirt sales	\$ 75.00
Bumper stickers	\$ 4.00
Book sales	\$105.00
Savings account earned interest	<u>\$ 13.77</u>
 Total receipts	 \$696.27
 Disbursements:	
1999 VHS Donation for Snake Brochure	\$127.50
(\$300 - \$172.50 account activation deposit in 1998)	
Printing cost for Catesbeiana 19(1)	\$420.93
Postage for Catesbeiana 19(1)	\$118.28
Postage for Newsletter 9(2)	\$ 57.18
Miscellaneous postage	\$ 2.03
New Books	\$123.78
Office Supplies	\$ 4.18
Collection Permit for Spring Field Trip	\$ 40.00
Food for Spring Meeting	\$ 29.00
Miscellaneous	<u>\$ 7.50</u>
 Total disbursements	 \$930.38
 Balance on hand September 23, 1999	
Checking	\$2344.27
Savings Account: Snake Brochure Fund	
VDGIF (1990)	\$ 500.00
SSAR (1990)	\$ 300.00
VHS (1999)	\$ 300.00
Other donations (1990-91)	\$ 125.00
Earned interest + unknown sources	<u>\$ 456.43</u>
Total	\$1681.43
 Total	 \$4025.70

Treasurer's Report

The society has a current membership of 170
New members since last Treasurer's Report = 10

Shay Garriock
Secretary/Treasurer

Guidelines for VHS Field-Study Grants

The purpose of Field-study Grants from the Virginia Herpetological Society is to stimulate and encourage herpetological research in Virginia. These Grants will be in variable amounts up to \$200.00 and are available to VHS members who do not have access to other sources of funding, such as institutions of higher learning and government grants.

Grant requests should include a description of the proposed research, or in the case of surveys the extent of the geographic area to be surveyed, and the methods which are to be used. A rough budget would be helpful. A brief justification of the importance of the work in contributing to the knowledge of Virginia's herpetofauna, citing standard works (e.g., Mitchell, J. C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.; Mitchell, J. C. and K. K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, Virginia. 122 pp.; Tobey, F. J. 1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*. Virginia Herpetological Society, Privately Printed, Purcellville, Virginia. 114 pp.) should be included. The results of all funded surveys must be submitted in manuscript form for publication in *Catesbeiana*.

Grant requests will be received by the current President until March 15 of each year. The President will then send copies to Executive Committee members by the end of March, and a Committee vote will be scheduled sometime during the annual Spring meeting. The Executive Committee will first determine that funds are available, and then that the Grant request is worthy of funding. A majority ruling is required for both votes. When a grant is approved, the Secretary/Treasurer will so inform the recipient, send a check for the amount determined by the Committee, and inform the recipient of the requirement to publish the results in *Catesbeiana*.

ANNOUNCEMENT
FALL 1999 MEETING OF THE
VIRGINIA HERPETOLOGICAL SOCIETY

The VHS will be having its fall meeting on October 23, 1999 at Three Lakes Park in Henrico County. Dr. Richard Hoffman of the Virginia Museum of Natural History will be the keynote speaker. Attendees will have an opportunity to tour the new Three Lakes Nature Center facilities. A catered luncheon, raffle, and photo contest will be part of the festivities. A nominal fee will be required to cover lunch. Registration is \$5.00 for members and \$6.00 for non-members; those 14 years old and younger enter free. Contact Bob Greenlee at (757) 255-2299 or email rgreenlee@dgif.state.va.us for additional information.

MEETING AGENDA

8:00 a.m.	Educational workshop for teachers
10:30 a.m.	Business meeting
12:00 p.m.	Lunch – At the Picnic Pavilion Photo Contest Raffle
1:00 p.m.	Mike Pinder - Introductions
1:15 p.m.	Keynote Address – Dr. Richard Hoffman
1:45 p.m.	Amphibian and Reptile Presentations
4:00 p.m.	Photo winners Raffle Social and tour of nature center

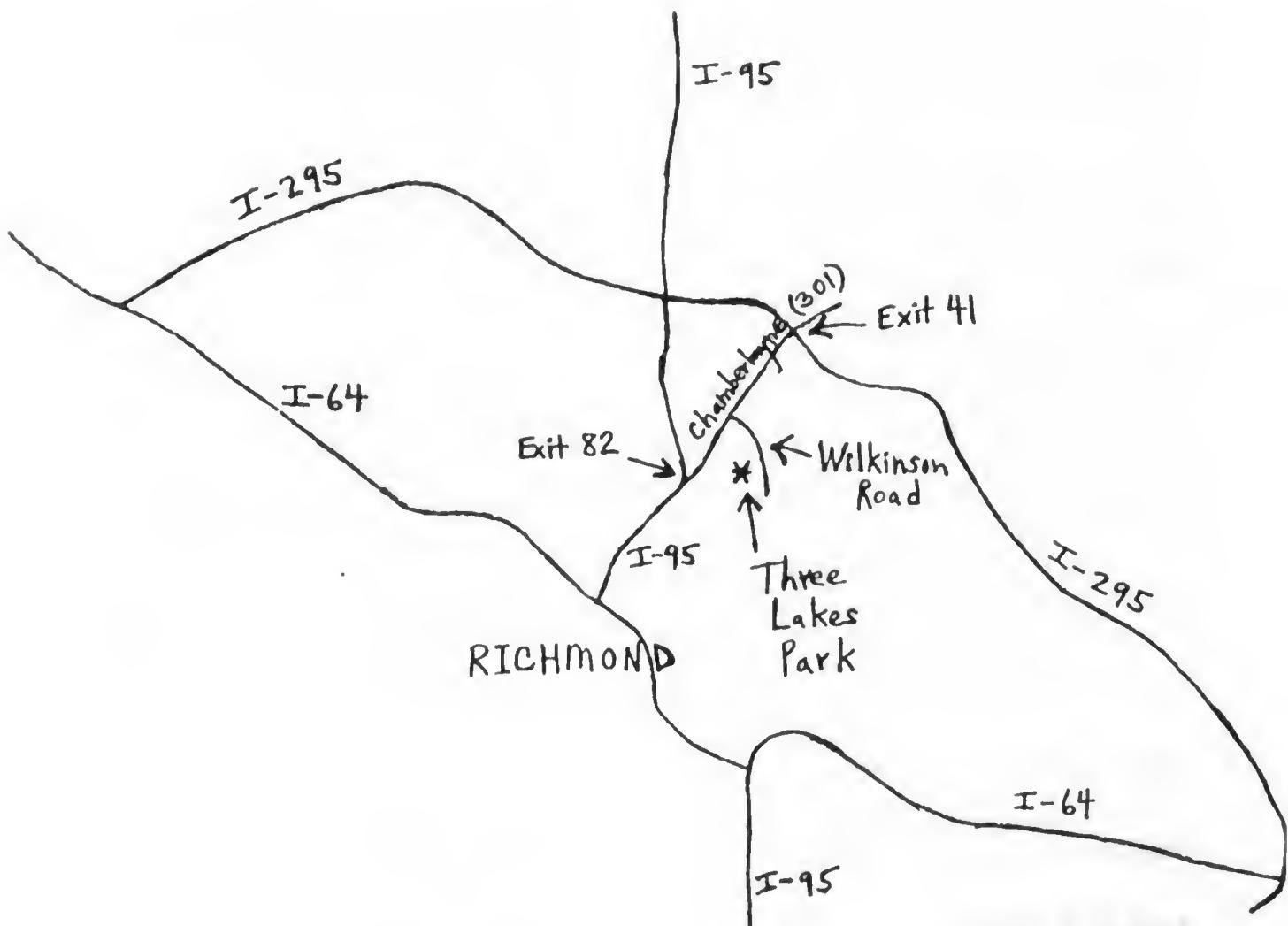
289 - ~~Ex 62~~
Fall Meeting Announcement

Directions to Three Lakes Park Nature Center:

From the west – Take I-64 east to I-95 north to Chamberlayne Avenue exit (Exit 82). Left on Chamberlayne to first light, right on Wilkinson Road. After approximately 1 mile on Wilkinson, turn right into the park.

From the south – Take I-95 north to Chamberlayne Avenue exit (Exit 82). Left on Chamberlayne to first light, right on Wilkinson Road. After approximately 1 mile on Wilkinson, turn right into the park.

From the north or east – Take I-295 to Route 301 south (Exit 41B). Travel south on 301 to 4th light. Turn left on Wilkinson Road. After approximately 1 mile on Wilkinson, turn right into the park.



MEMBERSHIP APPLICATION

I wish to initiate renew membership in the Virginia Herpetological Society for the year 2000 2001.

I wish only to receive a membership list. Enclosed is \$1.00 to cover the cost.

Name

Address

Phone

email address:

Dues Category: Regular (\$15.00)

Family (\$20.00)

Under 18 (\$8.00)

Life (\$225.00)

Interests: Reptiles Amphibians Captive Husbandry

Distribution Research

Specifically

Make checks payable to the Virginia Herpetological Society and send to the treasurer: Shay Garriock, VHS Secretary/Treasurer, 8622 Chapel Hill Road, Cary, NC 27513

Visit the VHS web site at: <http://vhsociety.home.mindspring.com/>

Field Notes

This section provides a means of publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: Scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data, and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. ALL FIELD NOTES MUST INCLUDE A BRIEF STATEMENT EXPLAINING THE SIGNIFICANCE OF THE RECORD (e.g., new county record) OR OBSERVATION (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed; all changes must be approved by the author(s) before publication.

If the field note contains information on a new county (or state) record, verification is REQUIRED in the form of a voucher specimen deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a color photograph (print or slide) deposited in the archives of the Virginia Herpetological Society. Photographs should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell (1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.) and Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*, Virginia Herpetological Society, Purcellville, VA. 114 pp.) to determine if they may have a new county record. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

The correct citation format is: Tobey, F. J. 1989. Field notes: *Coluber constrictor constrictor*. *Catesbeiana* 9(2): 35.

Photographs

High contrast black-and-white photographs of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Submissions should be no larger than 5 x 7 inches and printed on glossy paper. Published photographs will be deposited in the archives of the Virginia Herpetological Society.